

Abstracts

Theory of the Germanium Diode Microwave Switch

R.V. Garver, J.A. Rosado and E.F. Turner, Jr.. "Theory of the Germanium Diode Microwave Switch." 1960 Transactions on Microwave Theory and Techniques 8.1 (Jan. 1960 [T-MTT]): 108-111.

The application of a generally neglected theory of microwave detection to the poorly understood problem of metal-to-semiconductor junction behavior at microwave frequencies is discussed. Experimental results are disclosed which support the theory and appear to be the first experimental verification of it. It is shown how the theory predicts that germanium microwave diodes should exercise direct switching action upon microwaves while silicon microwave diodes should not, as had been observed in the past but with no explanation.

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